

Semester 1 Exam Review- Chapters 1 & 2**1.1 Variables in Algebra**

1. Evaluate $6w + 3x$ when $w = 5$ and $x = 3$.

2. The simple interest I on an investment of P dollars at an interest rate r for t years is given by $I = Prt$. Find the time it would take to earn \$1700 on an investment of \$28,000 at a rate of 4.4%.

1.2 Exponents and Powers

3. Evaluate the expression $(7n + 4p)^2$ when $n = 1$ and $p = 3$

4. Is $x = 4$ a solution of the equation $2x + 1 = 8 + x \div 4$

1.3 Order of Operations

Evaluate the expression.

5. $8 - 3 + 4 \cdot 12 \div 9$

6. $[(7 - 6)^2 + 4] + 21$

7. $(-17) + 3 - (5 + 3)^2$

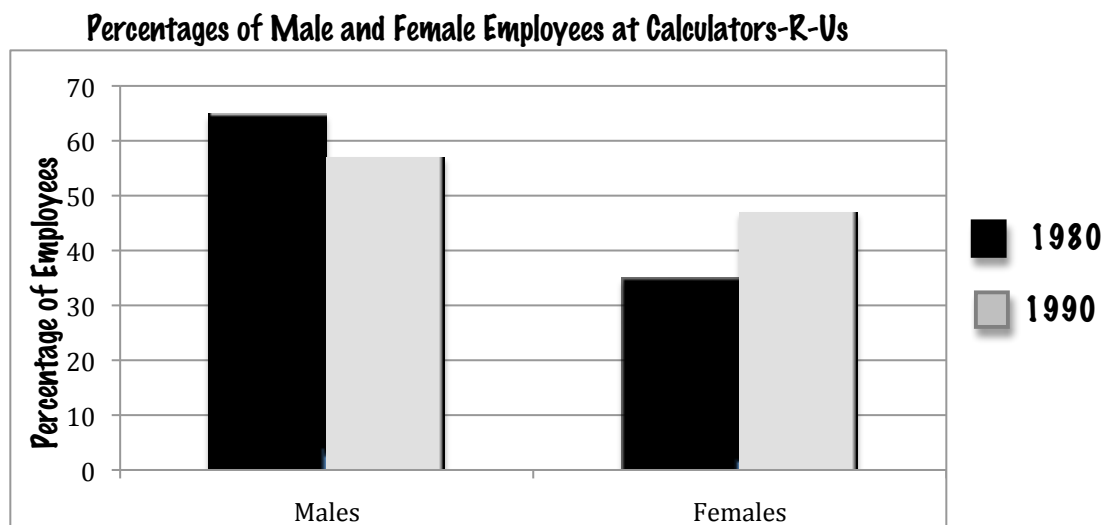
1.5 A Problem Solving Plan

8. Write an algebraic expression for "three times the difference of a number x and 5."

9. Write an algebraic expression for "seven less than twice a number."

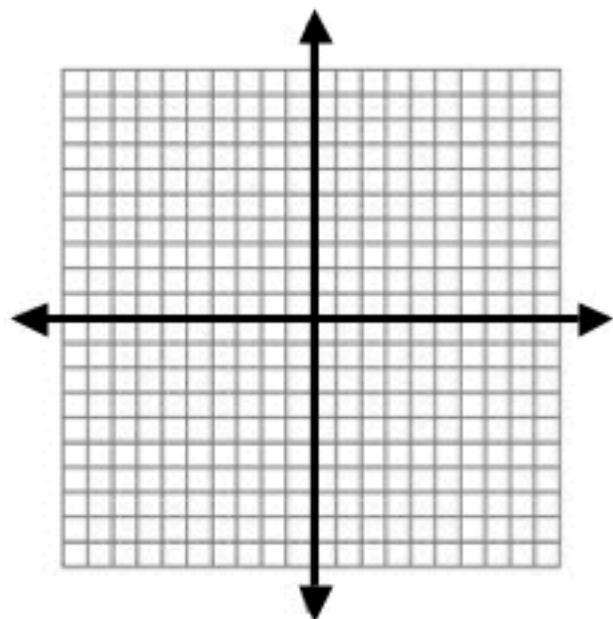
1.6 Tables and Graphs

10. The percentages of males and females working for a company in 1980 and 1990 are shown in the bar graph. What is the increase in the percentage of females employed for the ten-year period?



11. Make a table of values for the line $f(x) = 2x + 3$ and plot the line.

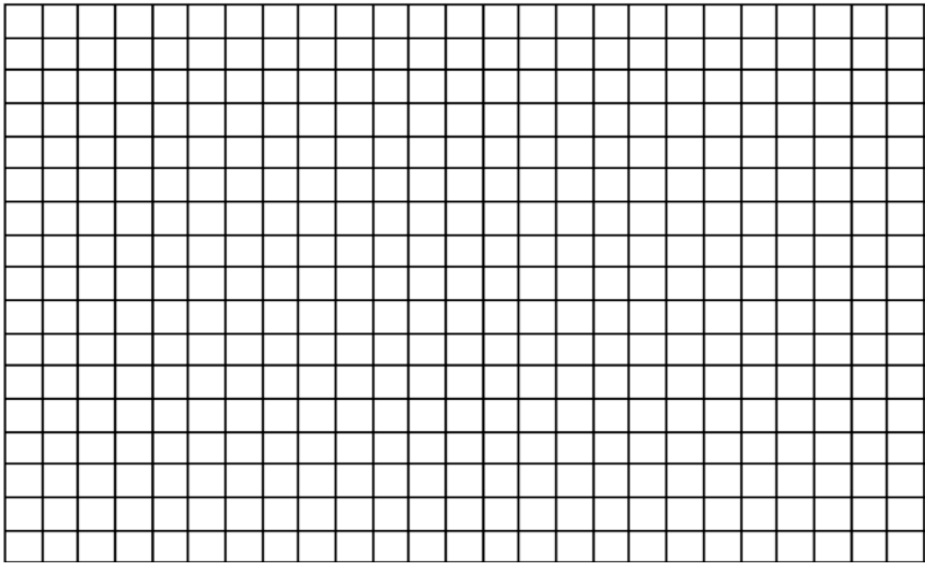
x	$f(x)$
-1	
0	
1	
2	
3	



12. The table gives the times spent watching TV and grades of several students.

Weekly TV (H)	6	12	18	24	30	36
Grade (%)	67.5	82.5	62.5	60	47.5	50

Display the data on a scatter plot of grade versus time.



Describe any relationship you see in the scatter plot.

1.7 Functions

13. Does the input-output table represent a function? EXPLAIN your answer. If it does represent a function, list the domain and range.

Input	2	3	4	5
Output	0	3	6	9

2.1 The Real Number Line

14. Graph $\frac{6}{7}$ on a number line.

2.2 Addition of Real Numbers

Simplify the following expressions *without a calculator*.

15. $-21 + 91$

16. $88 + 37 + (-143)$

17. $28 - (-15) - |10|$

18. The morning temperature was -3° . By noon, the temperature was 10° . How many degrees had the temperature risen?

2.3 Subtraction of Real Numbers

Simplify the following expressions *without a calculator*.

19. $-14 - (-20)$

20. $-8 - (-42) - 19$

21. $17 - |-25|$

2.5 Multiplication of Real Numbers

Simplify the following expressions *without a calculator*.

22. $-8 \cdot -12 \cdot -1$

23. $(-13)(12)$

24. $(5)(-x)(-6)$

2.6 Distributive Property

Use the distributive property to simplify the following expressions:

25. $3(x + 27)$

26. $(2x + 12)13$

27. $3(2 - x) - 2(3 - x)$

2.7 Division of Real Numbers

Simplify the following expressions *without a calculator*:

28. $(-27) \div (-3)$

29. $\frac{10}{-2\frac{1}{2}}$

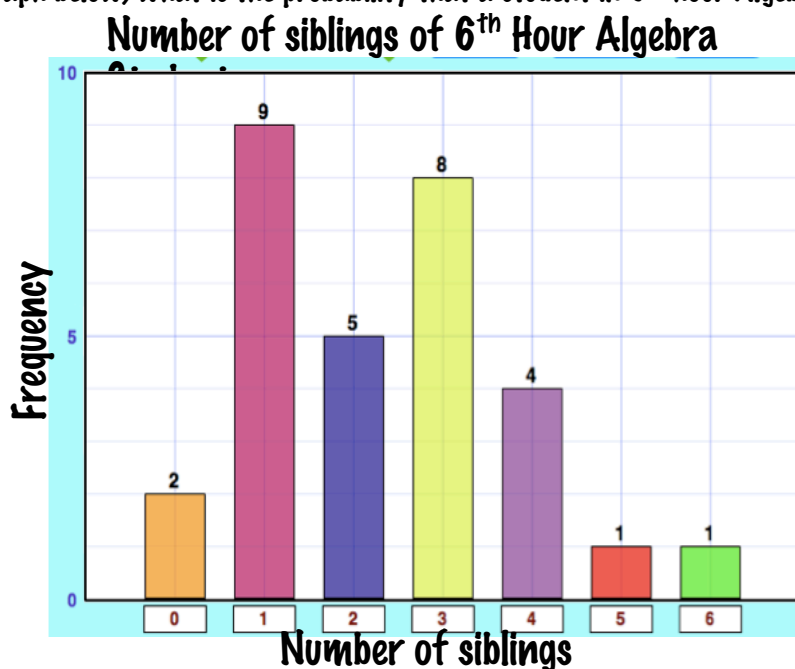
30. $-18 \div -3\frac{2}{5}$

2.8 Probability and Odds

31. A box contains 7 green, 5 yellow, and 3 purple candies. Find the probability of picking a purple candy.

32. Find the odds of randomly choosing the letter m in the word: MATHEMATICS.

33. Given the bar graph below, what is the probability that a student in 6th hour Algebra chosen at random has 3 siblings?



FOR ADDITIONAL CHAPTER 1 AND 2 REVIEW PLEASE REFER TO ANY OR ALL OF THE FOLLOWING:

- Your classroom notes and examples
- Corresponding book sections
- Chapter 1 Review on pages 54 – 56
- Chapter 1 Test on page 57
- Chapter 1 Extra Practice Problems on page 797
- Chapter 2 Review on pages 122 – 124
- Chapter 2 Test on page 125
- Chapter 2 Extra Practice Problems on page 798

STUDENTS CAN CHECK ANSWERS IN THE BACK OF THE BOOK. IF ANSWERS ARE NOT AVAILABLE IN THE BACK OF THE BOOK, STUDENTS ARE ENCOURAGED TO USE THE TEACHER BOOK TO CHECK ANSWERS BEFORE TAKING THE SEMESTER EXAM.